Palais-Royal and at the Collége de France.—L. **Maquenne** and E. **Demoussy**: The distribution and migration of copper in the tissues of green plants. Twenty-seven species of plants were examined, and copper was found in all parts of the plants, this metal tending to accumulate at points where the percentage of water is at a maximum. The increase of copper is not the consequence of a physico-chemical phenomenon, as is the case with silica and calcium carbonate, but follows a process analogous with that governing the nutrition of the plant.—A. **Blondel**: A method for the measurement of atmospheric transparency.—L. **Pomey**: Fermat's numbers.—M. **Pauthenier**: The absolute retardations in Kerr's phenomenon.—P. **Braesco**: The expansion of copper-antimony alloys. There is a sharp maximum in the increase of length for the alloy containing 38·6 per cent. of antimony, a composition corresponding with the compound Cu$_3$Sb; no indication of the existence of any other definite compound is given by the expansion curves.—N. H. **Dhar** and G. **Urbain**: The polarisation e.m.f. and the constitution of complex cobaltic compounds.—E. **Wourtzel**: The existence of nitrous anhydride in the gaseous state. The contraction produced on mixing known quantities of NO and O$_2$ was measured, keeping the NO in excess. Two experiments gave a contraction corresponding with the presence of about 2·5 per cent. of N$_2$O$_3$ in the gas mixture. This is sufficient to explain the known production of nitrite when the gas is absorbed by alkaline solutions.—A. **Kling**, D. **Florentin**, and E. **Jacob**: The preparation of chlorinated methyl carbonates.—F. **Canac**: Determination of the orientation of the rows and reticular planes of a crystal.—P. **de Souza**: The Lower and Middle Carboniferous in Portugal.—J. **Savornin**: The geology of Djurdjura and Biban (Algeria).—P. **Russo**: The phosphatic Eocene and Turritelles layers of Tadla (Western Morocco).—L. **Besson**: Diminution of the transparency of the air at Paris. Systematic observations from the summit of the Tour Saint-Jacques in the centre of the city, initiated in 1895 by J. Joubert and carried on continuously under identical conditions for twenty-five years, lead to the conclusion that for the first twenty years the clearness of the atmosphere was slowing decreasing; during the period of the war this diminution became much more marked.—G. **André**: The inversion of cane-sugar during the preservation of oranges.—E. **Saillard**: The nitrogen balance in sugar manufacture. Precipitation of the albuminoid materials of the beetroot by sulphurous acid, bisulphites, and hydrosulphites. Sulphurous acid and its compounds precipitate the same polarising materials as basic lead acetate, working with normal beets; they also precipitate the same albuminoid materials from the beet-juice as copper hydrate.—M. **Lemoigne**: A specific reaction of 2 : 3-butyleneglycol and of acetylmethylcarbinol, products of the butyleneglycollic fermentation. As the production of acetylmethylcarbinol serves to differentiate certain closely related groups of micro-organisms, a delicate and specific test is desirable. The culture is oxidised with a little ferric chloride and distilled; diacetyl passes into the distillate. This is treated with ammonia, hydroxylamine chloride, and a nickel salt, when the scarlet nickel dimethylglyoxim is produced. Acetylmethylcarbinol at a dilution of 1 in 1,000,000 can be readily recognised by this test.—W. **Kopaczewski** and Mme. Z. **Gruzewska**: Seric toxicity and the physical properties of colloidal gels. A relation has been established between the toxic power of gels and the sign of their electric charge. Gels with a positive electrical charge (alumina, barium carbonate, ferric arsenate, calcium phosphate, ferric oxide) have no toxic power, but an electro-negative silica gel is toxic.—A. **Krempf**: The development and relations of the orthosept and sterigmatosept in the Anthozoa.—E. **Grynfeltt** and L. **Carrère**: The muscles of the iris of the crocodile.—L. **Chopard**: Observations on the praying mantis and its parasites. M. **Lagrange**: The compressive and decompressive operation of the eyeball.—M. **Fouassier**: The decomposition of hydrogen peroxide by micro-organisms extracted from pasteurised milk.

BOOKS RECEIVED.

Practical Science for Girls: As Applied to Domestic Subjects. By E. E. Jardine. Pp. xiii+112. (London: Methuen and Co., Ltd.) 3*s*.

A Class-Book of Organic Chemistry. By Prof. J. B. Cohen. Vol. ii. Pp. vii+156. (London: Macmillan and Co., Ltd.) 4*s*. 6*d*.

A Manual of Practical Anatomy. By Prof. T. Walmsley. In 3 parts. Part i.: The Upper and Lower Limbs. Pp. viii+176. (London: Longmans and Co.) 9*s*. net.

Employment Psychology. By Dr. H. C. Link. Pp. xii+440. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd.) 10*s*. 6*d*. net.

The Birds of the British Isles and their Eggs. By T. A. Coward. First series. Pp. vii+376+159 plates. (London: F. Warne and Co., Ltd.) 12*s*. 6*d*. net.

Mathematics for Engineers. By W. N. Rose. Part ii. Pp. xiv+419. (London: Chapman and Hall, Ltd.) 13*s*. 6*d*. net.

Physiology and National Needs. Edited by Prof. W. D. Halliburton. Pp. vii+162. (London: Constable and Co., Ltd.) 8*s*. 6*d*. net.

Scientific Method: Its Philosophy and its Practice. By F. W. Westaway. New edition. Pp. xxi+426. (London: Blackie and Son, Ltd.) 10*s*. 6*d*. net.

Physiology of Farm Animals. By T. B. Wood and Dr. F. H. A. Marshall. Part i.: General. By Dr. F. H. A. Marshall. Pp. xii+204. (Cambridge: At the University Press.) 16*s*. net.

The Universities and the Training of Teachers. By F. J. R. Hendy. Pp. 28. (Oxford: At the Clarendon Press.) 1*s*. 6*d*. net.

Food Supplies in Peace and War. By Sir R. H. Rew. Pp. vii+183. (London: Longmans and Co.) 6*s*. 6*d*. net.

Telephonic Transmission: Theoretical and Applied. By J. G. Hill. Pp. xvi+398. (London: Longmans and Co.) 21*s*. net.

DIARY OF SOCIETIES.

THURSDAY, FEBRUARY 12.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. A. E. Conrady Recent Progress in Applied Optics.

ROYAL SOCIETY, at 4.30.—J. W. McBain and C. S. Salmon: Colloidal Electrolytes. Soap Solutions and their Constitution.—C. C. Farr and D. B. Macleod: The Viscosity of Sulphur.—C. V. Raman and B. Banerji: Kaufmann's Theory of the Impact of the Pianoforte Hammer.—Commander T. Y. Baker, R.N., and Prof. L. N. G. Filon: A Theory of the Second Order Longitudinal Spherical Aberration for a Symmetrical Optical System.—Prof J. W. Nicholson: The Lateral Vibrations of Sharply Pointed Bars.—R. E. Slade: A New Method of Spectrophotometry in the Visible and Ultra-violet and the Absorption of Light by Silver Bromide.—Dr. S. Chapman: A Note on Dr. Chree's Discussion of Two Magnetic Storms (Title only).—Dr. C. Chree: An Explanation of the Criticisms on Dr. Chapman's Recent Paper: "An Outline of a Theory of Magnetic Storms" (Title only).

LONDON MATHEMATICAL SOCIETY (at Burlington House), at 5.—G. S. Le Beau: A Property of Polynomials whose Roots are Real.—The late E. K. Wakeford: Canonical Forms.—E. Landau and A. Ostrowski: A Problem of Diophantine Analysis.—G. H. Hardy and J. E. Littlewood The Zeros of Riemann's Zeta-function.

ROYAL INSTITUTE OF PUBLIC HEALTH, at 5.—Dr. D. P. Sutherland: The Work of a Tuberculosis Department.

ROYAL SOCIETY OF MEDICINE (Balneology and Climatology Section), at 5.30.—Dr. F. G. Thomson, Dr. J. C. McClure, and W. P. Kennedy: Resumed Discussion on The Merits and Defects of the British Health Resorts.

BRITISH PSYCHOLOGICAL SOCIETY (Education Section) (at London Day Training College), at 6.—Dr. C. W. Kimmins: The Dreams of Children in Blind, Deaf, and Industrial Schools.

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INSTITUTION OF ELECTRICAL ENGINEERS (at Institution of Civil Engineers), at 6.—Major K. Edgcumbe: The Protection of Alternating-current Distribution Systems without the Use of Special Conductors.

OIL AND COLOUR CHEMISTS' ASSOCIATION (at 2 Furnival Street), at 7.—Dr. R. S. Morrell: Colloid Chemistry of Paints and Varnishes.

OPTICAL SOCIETY, at 7.30.—J. W. French: The Surface Layer of an Optical Polishing Tool.—Mrs. C. H. Griffiths: Aberration Effects in Star Images.—R. W. Cheshire and W. Shackleton: The Testing of Heliograph Mirrors.

INSTITUTION OF AUTOMOBILE ENGINEERS (Graduate Section) (at 28 Victoria Street), at 8.—F. R. Cowell: Steering Gears.

ROYAL SOCIETY OF MEDICINE (Neurology Section), at 8.30.—Dr. Rows: Anxiety States.

SOCIETY OF ANTIQUARIES, at 8.30.

FRIDAY, FEBRUARY 13.

ROYAL ASTRONOMICAL SOCIETY, at 5.

PHYSICAL SOCIETY, at 5.—Prof. C. H. Lees: Presidential Address.—Sir Arthur Schuster: Atmospheric Refraction during Total Solar Eclipses.—To be followed by the Annual General Meeting.

ROYAL COLLEGE OF SURGEONS, at 5.—Prof. W. G. Spencer: The Historical Relationship between Experiments on Animals and the Development of Surgery (Hunterian Lecture).

MALACOLOGICAL SOCIETY OF LONDON (at the Linnean Society), at 6.

JUNIOR INSTITUTION OF ENGINEERS (at 39 Victoria Street), at 7.30.—F. E. Henman: Gas Manufacture.

ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Prof. W. M. Bayliss: The Volume of the Blood and its Significance.

SATURDAY, FEBRUARY 14.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Sir F. W. Dyson: The Astronomical Evidence bearing on Einstein's Theory of Gravitation. III. Deflection of Light in the Sun's Gravitational Field.

MONDAY, FEBRUARY 16.

ROYAL COLLEGE OF SURGEONS, at 5.—Prof. W. G. Spencer: The Historical Relationship between Experiments on Animals and the Development of Surgery (Hunterian Lecture).

INSTITUTION OF ELECTRICAL ENGINEERS (Informal Meeting) (at Chartered Institute of Patent Agents), at 7.—A. B. Eason: Automatic Telephony for Private Branch Exchanges.

ARISTOTELIAN SOCIETY (at 74 Grosvenor Street, W. 1), at 8.—A. F. Shand: Impulse, Emotion, and Instinct.

ROYAL INSTITUTE OF BRITISH ARCHITECTS, at 8.—P. Waterhouse: Education of the Architect.

ROYAL SOCIETY OF ARTS, at 8.—C. F. Cross: Recent Research in the Cellulose Industry (Cantor Lecture).

SURVEYORS' INSTITUTION, at 8.—Capt. W. H. Tapp: Survey on the Western Front.

ROYAL GEOGRAPHICAL SOCIETY (at Æolian Hall), at 8.30.—H.E. the Spanish Ambassador: The Spanish Zones in Morocco.

MEDICAL SOCIETY OF LONDON, at 9.—Dr. H. R. Spencer: Tumours complicating Pregnancy, Labour, and the Puerperium (Lettsomian Lecture).

TUESDAY, FEBRUARY 17.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. E. Wilson: Magnetic Susceptibility.

ROYAL STATISTICAL SOCIETY, at 5.15.—Prof. E. H. Starling: Food Conditions in Germany during the War.

INSTITUTION OF PETROLEUM TECHNOLOGISTS (at Royal Society of Arts), at 5.30.—Dr. W. R. Ormandy: Recent Patents on Mixed Fuels.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN (Technical Meeting, at 7.—N. E. Luboshez: Fancy Lighting in Portraiture.

ROYAL ANTHROPOLOGICAL INSTITUTE, at 8.15.—J. Reid Moir: The Occurrence of Flint Implements of Man in the Glacial Chalky Boulder Clay of Suffolk.

WEDNESDAY, FEBRUARY 18.

ROYAL UNITED SERVICE INSTITUTION, at 3.—Lt.-Col. A. H. W. Haywood: The Campaign in the Cameroons.

ROYAL SOCIETY OF ARTS, at 4.30.—S. Preston: English Canals and Inland Waterways.

ROYAL COLLEGE OF SURGEONS, at 5.—Prof. W. G. Spencer: The Historical Relationship between Experiments on Animals and the Development of Surgery (Hunterian Lecture).

ROYAL METEOROLOGICAL SOCIETY, at 5.—Capt. C. J. P. Cave: The Status of a Meteorological Office and its Relation to the State and to the Public.—W. H. Dines: Atmospheric and Terrestrial Radiation.—D. Brunt: Internal Friction in the Atmosphere.

ROYAL SOCIETY OF MEDICINE (History of Medicine Section), at 5.—Dr. R. C. Buist: The Salernitan Verses and their English Versions.

INSTITUTION OF ELECTRICAL ENGINEERS (Wireless Section) (at Institution of Civil Engineers), at 6.—Major C. E. Prince: Wireless Telephony on Aeroplanes.

ROYAL AERONAUTICAL SOCIETY (at Royal Society of Arts), at 8.—Major P. Bishop: Aircraft Design in relation to Standardisation.

ROYAL MICROSCOPICAL SOCIETY, at 8.—Mrs. Agnes Arber: Studies on the Binucleate Phase in the Plant cell.—R. Beer and Mrs. Agnes Arber: Multinucleate Cells: An Historical Study (1879–1919).—C. Akehurst: Exhibition of Prof. Silverman's Illuminator for Opaque Objects.

THURSDAY, FEBRUARY 19.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—A. H. Smith: Illustrations of Ancient Greek and Roman Life in the British Museum.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: Prof. B. Moore and T. A. Webster: Studies of Photo-synthesis in Fresh-water Algæ.—Prof. W. M. Bayliss: The Properties of Colloidal Systems. IV. Reversible Gelation in Living Protoplasm.—Rev. F. J. Wyeth: The Development of the Auditory Apparatus in *Sphenodon punctatus*.

LINNEAN SOCIETY, at 5.

INSTITUTION OF MINING AND METALLURGY (at Geological Society), at 5.30.—T. B. Stevens and C. E. Blackett: The Use of Haloid Cyanides for the Purpose of Gold Extraction.

CHEMICAL SOCIETY, at 8.—S. B. Schryver and C. C. Wood: A New Method for the Estimation of Methyl Alcohol.—C. S. Gibson and W. J. Pope: ββ'-Dichlorethyl Sulphide.—W. K. Slater and H. Stephen: Some Derivatives of Fisetol.—M. F. Barker: Calorific Value and Constitution. Part I.—J. B. Firth: Surface Tension of Alcohol-Water Mixtures.

FRIDAY, FEBRUARY 20.

GEOLOGICAL SOCIETY OF LONDON, at 3.—(Anniversary Meeting.)

ROYAL COLLEGE OF SURGEONS, at 5.—Prof. G. Elliot Smith: The Evolution of the Cerebellum (Arris and Gale Lecture).

INSTITUTION OF MECHANICAL ENGINEERS (Annual General Meeting), at 6.—E. M. Bergstrom: Recent Advances in the Utilisation of Water Power (Resumed Discussion).

CONCRETE INSTITUTE (at 296 Vauxhall Bridge Road), at 6.—H. K. Dyson: Some Points in Reinforced Concrete Design.

INSTITUTION OF ELECTRICAL ENGINEERS (Students' Meeting) (at Faraday House), at 7.—A. Serner and Others: Discussion on State Ownership *v.* Private Enterprise.

ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Dr. E. J. Russell: British Crop Production.

SATURDAY, FEBRUARY 21.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Sir J. J. Thomson: Positive Rays.

PHYSIOLOGICAL SOCIETY (at Lister Institute), at 4.

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